

IN THE CLAIMS

1. (Previously Presented) A medical system for delivering a small interfering RNA into a pre-determined location in a brain of a patient comprising:
 - (a) an intracranial access device;
 - (b) a deliverable amount of a small interfering RNA or a vector encoding said small interfering RNA, wherein said small interfering RNA has a length of between about 15 and about 30 nucleotides, and said small interfering RNA comprises SEQ ID NO: 1; and
 - (c) a delivery means for delivering said small interfering RNA or vector encoding said small interfering RNA to said location of the brain of said patient from said intracranial access device through a stereotactically implanted catheter.
- 2–9. (Cancelled)
10. (Previously Presented) The medical system of claim 1 wherein said intracranial access device is an intracranial access port.
- 11-13. (Cancelled)
14. (Previously Presented) The medical system of claim 1 wherein said predetermined location is the dentate nucleus, emboliform nucleus, the globose nucleus, the fastigial nucleus of the cerebellum (collectively the deep cerebellar nuclei), or the cerebellar cortex.
- 15-23 (Cancelled)
24. (Previously Presented) The medical system of claim 1 wherein said intracranial access device comprises an intracranial access port and wherein said delivery means is injection from an external syringe into the intracranial access port.
25. (Previously Presented) The medical system of claim 1 wherein said delivery means is an infusion pump.
- 26-85 (Cancelled)
86. (Previously Presented) The medical system of claim 1 wherein said small interfering RNA inhibits the translation of ataxin-1 protein.

87. (Previously Presented) The medical system of claim 1 wherein said small interfering RNA reduces levels of mRNA encoding ataxin-1 protein.

88. (Cancelled).

89. (Previously Presented) The medical system of claim 1 wherein said small interfering RNA has sufficient complementarity to the ataxin-1 mRNA for said small interfering RNA molecule to direct cleavage of said ataxin-1 mRNA via RNA interference.

90. (Previously Presented) A medical system for delivering a small interfering RNA into a pre-determined location in a brain of a patient comprising:

- (a) an intracranial access device;
- (b) a deliverable amount of a small interfering RNA or a vector encoding said small interfering RNA, said small interfering RNA comprising SEQ ID Nos: 1 and 2; and
- (c) a delivery means for delivering said small interfering RNA or vector encoding said small interfering RNA to said location of the brain of said patient from said intracranial access device through a stereotactically implanted catheter.

91. (Previously Presented) The medical system of claim 90 wherein said intracranial access device is an intracranial access port.

92. (Previously Presented) The medical system of claim 90 wherein said predetermined location is the dentate nucleus, emboliform nucleus, the globose nucleus, the fastigial nucleus of the cerebellum (collectively the deep cerebellar nuclei), or the cerebellar cortex.

93. (Previously Presented) The medical system of claim 90 wherein said intracranial access device comprises an intracranial access port and wherein said delivery means is injection from an external syringe into the intracranial access port .

94. (Previously Presented) The medical system of claim 90 wherein said delivery means is an infusion pump.

95. (Previously Presented) The medical system of claim 90 wherein said small interfering RNA inhibits the translation of ataxin-1 protein.

96. (Previously Presented) The medical system of claim 90 wherein said small interfering RNA reduces levels of mRNA encoding ataxin-1 protein.
97. (Previously Presented) The medical system of claim 90 wherein said small interfering RNA has sufficient complementarity to the ataxin-1 mRNA for said small interfering RNA molecule to direct cleavage of said ataxin-1 mRNA via RNA interference.
98. (Cancelled)